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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/074,765  
Filing Date: February 12, 2002  
Appellant(s): BANERJI ET AL.

Todd N. Snyder, Reg. No. 41,320  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 06/09/2010 appealing from the Office action mailed 01/15/2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

1-23.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

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REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

**(8) Evidence Relied Upon**

US 5,400,075	Savatier	03-1995
US 5,805,225	Tahara et al.	09-1998
US 5,414,780	Carnahan	5-1995
US 5,719, 986	Kato et al.	02-1998
US 5,680,129	Weinberger et al.	10-1997
US 5,771,239	Moroney et al.	06-1998

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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2. Claims 1-2 and 11-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Savatier (US 5,400,075).

Re claim 1, Savatier discloses a method of compressing video (fig. 1), comprising:  
grouping video frames (GOF<sub>i</sub> and GOF<sub>i+1</sub> of fig. 1, grouping the video stream into groups of pictures as GOFs) that are only between consecutive I-frames (I of GOF<sub>i</sub> and I of GOF<sub>i+1</sub> of fig. 1) into a video data set (IBBPBBPBB frames of fig. 1; col. 2, lines 44-53);

splitting (dividing) the video data set into a plurality of homogeneous files (note dividing the video data set into Slice 1-Slice n, MB1-MBr, and Y1-Y4 and U and V; fig. 1, col. 2, lines 53-60, Y1-Y4 is considered as homogeneous files); and

individually compressing each of the homogeneous files (col. 2, lines 60-62, the luminance and chrominance information are homogeneous files because they have uniform or same properties such as Y1-Y4, U, and V of fig. 1; and the luminance and chrominance are coded separately).

Re claim 2, Savatier further discloses wherein the video frames include P-frames and B-frames (B and P frames within the GOF, fig. 1).

Re claim 11, Savatier further discloses wherein said compressing includes bit plane encoding quantized transform coefficients obtained from the video data set (9-11 of fig. 1).

Re claim 12, Savatier further discloses wherein said compressing includes performing a run-length encoding of bit planed encoded coefficients (8 and 11 of fig. 1).

Re claim 13, Savatier further discloses wherein said homogeneous files have similar statistical properties (e.g. Y1-Y4 of fig. 1).

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Re claim 14, Savatier further discloses further comprising multiplexing the separate files into a bit stream (col. 2, lines 60-62).

Re claim 15, Savatier further discloses comprising prefixing a corresponding header to each of the separate files, said header indicating a size of a corresponding separate file (col. 3, lines 46-53).

Re claim 16, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as in any of claims 1, 2, 11-15 (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

Re claim 17, Savatier discloses a video compression system (fig. 1), comprising:  
means (fig. 1) for grouping video frames (GPFi and GOFi+1 of fig. 1) that are only between consecutive I-frames (I of GOFi and I of GOFi+1 of fig. 1) into a video data set (IBBPBBPBB frames of fig. 1; col. 2, lines 44-53);

means (fig. 1) splitting (dividing) the video data set into a plurality of homogeneous files (Slice 1-Slice n, MB1-MBr, and Y1-Y4 and U and V of fig. 1, col. 2, lines 53-60); and

means (10 of fig. 1) individually compressing each of the homogeneous files (col. 2, lines 60-62, the luminance and chrominance information are homogeneous files because they have

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uniform or same properties such as Y1-Y4, U, and V of fig. 1, and the luminance and chrominance are coded separately).

Re claim 18, Savatier further discloses means (10 and 12 of fig. 1) for multiplexing the individually compressed files into a bit stream (col. 2, lines 60-62).

Re claims 19-20, see analysis in claims 1 and 2;

Re claim 21, see analysis in claim 1;

Re claims 22-23 see analysis in claims 1 and 14.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3, 5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Savatier (US 5,400,075) in view of Tahara et al. (US 5,805,225).

Re claims 3, 5, Savatier does not particularly disclose storing mode information of the video data set and motion components in separate files; and storing B-frame components of the video data set and P-frame components of the video data set in separate files as claimed.

Tahara teaches storing mode information of the video data set and motion components in separate files and B-frame components of the video data set and P-frame components of the video data set in separate files (51a, 51b, 51c, and 51 of fig. 6).

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Taking the teachings of Savatier and Tahara as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Savatier into the encoder of Savatier for improving encoding and decoding efficiency.

Re claims 16/3 and 16/5, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

3. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Savatier (US 5,400,075) in view of Carnahan (US 5,414,780).

Re claims 4 and 16, Savatier teaches splitting video data into the B components and P components but not include storing mode information of the video data set and motion components that includes storing horizontal components of the video data set and vertical components of the video data set in separate files as claimed.

However, Carnahan teaches storing mode information of the video data set (horizontal and vertical vectors) and motion components NxM horizontal and vertical image data block include vectors) that include storing horizontal components of the video data set and vertical components of the video data set in separate files (col. 3, line 49-col. 4, line 3) and performing a



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run-length encoding of bit planed encoded coefficients (col. 11 and 12, note TRANSFORMER (52), QUANTIZER (54), and CODER (56) performs transforming, quantizing and nm-length coding the video data set).

Therefore, taking the teachings of Savatier and Carnahan as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the step of storing the mode information and motion components into the separate files (memories) and the transformer, quantize and coder of Carnahan into the encoder of Savatier for the same purpose of run-length coding the transformed, quantized video data set that retrieves from the separate files.

Doing so would provide the quantization process reduces the magnitude or number of bits of each quantized word and the coder circuit to implement coding in an efficient manner.

Re claim 16/4, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

4. Claims 6, 7, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Savatier (US 5,400,075) in view of to claim 1 and in view of Kato et al. (US 5,719,986).

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Re clam Claims 6, 7, and 16, Savatier teaches the encoder for encoding the video sequence into the MPEG compliant transport stream using predicted frame information but not include storing mode 3 B- frame components of the video data set and mode 0, 1, and 2 B-frame components of the video data set in separate files and different color components of the video data set in different files as claimed.

However, Kato teaches storing mode 3 B- frame components of the video data set (61 of fig. 3, note intra prediction for B-frame and mode 0, 1, and 2 B-frame components (14, 23 of fig. 3, note forward prediction, backward prediction, and bi-directional prediction) of the video data set in separate files and storing different color components of the video data set in different files (12 of fig. 3, see also fig. 5C, note Y, Cb and Cr are different color components).

Taking the teachings of Savatier and Kato as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings intra-prediction mode for B- frame having forward, backward, and bi-directional prediction of Kato into the encoder of Savatier to improve efficiency of encoding. Doing so would provide to a decoder a higher quality image.

Re claims 16/6 and 16/7, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

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5. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Savatier (US 5,400,075) in view of Weinberger et al (US 5,680,129).

Re claims 8 and 16, Savatier fails particularly teach mapping negative values in one of the homogeneous files into positive values, and file header as claimed.

However, Weinberger teaches mapping negative values in one of the homogeneous files into positive values (col. 15, lines 59-64), and file header.

Therefore, taking the teachings of Savatier and Weinberger as a whole, it would have been obvious to one of ordinary skill in the art to modify the technique of mapping negative values into one of homogeneous files into positive values into the encoder of Savatier to improve performance of encoding color image. Doing so would result in a more efficient compression of the image.

Re claim 16/8, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

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6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Savatier (US 5,400,075) in view of Moroney et al. (US 5,771,239).

Re claims 9 and 10, Savatier does not particularly teach applying a grammar based code and a YK algorithm as claimed.

However, Moroney teaches the MPEG coding technique uses a formal grammar ("syntax") and a set of semantic rules for the construction of bitstreams to be transmitted, wherein the grammar encoding would obviously have YK algorithm to encode the homogeneous files.

Therefore, taking the combined teachings of Moroney and Savatier as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Moroney into the method of Savatier to improve coding efficiency.

Re claims 16/9 and 16/10, Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

#### **(10) Response to Argument**

**A. Claims 1, 2, and 11-23 are clearly anticipated by Savatier.**

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The appellant argues that Savatier does not disclose grouping video frames are only between consecutive frames into a video data set, and the video data set is then split into a plurality of homogeneous files, with each of the homogenous files then being individually compressed as set forth in claims 1, 17, 19, 21, and 22, pages 7-11 of the appeal brief.

The examiner strongly disagrees with the appellant. It is submitted that Savatier discloses the P-frames and the B-frames (see figure 1, note BBPBBPBB of fig. 1) between two I-frames (I beginning of GOFi of fig. 1; and I ending of GOFi of fig. 1) are compressed independently of any other frames (P or B frames are encoded by the encoder, figure 3).

Savatier discloses when intra encoding mode is selected for coding, and I frame as intra frame is encoded in the intra encoding mode (col.2, line 65-col. 3, line 12), when the inter encoding mode is selected, the encoder encodes **only** P or B frames within the I frames of GOFi (col. 3, lines 13-45), since the encoder encodes P or B frames within I frames, so the encoder inherently performs grouping video frames (P and B frames are within GOFi that comprises consecutive I-frames) between consecutive I-frames (GOFi comprises two consecutive I-frames, figure 1) into a video data set (P and B frames are only encoded, when the encoder (fig. 3) selects inter-frame coding mode, col. 3, lines 13-45).

Savatier further discloses splitting the video data set consisting of non- intra video frames (P or B frames) into a plurality of data sequences (col. 2, lines 54-66, see figure 1), frame is divided into slices that contain macroblocks, and each macroblock is divided into 6 blocks including four blocks of information relating to luminance signal and two blocks of information relating to chrominance signal, and block of data is encoded by encoder (see figure 2).

**B. Claims 3, 5, and 16 are rendered obvious by Savatier and Tahara et al.**

The appellant argues that there is no prima facie case of obviousness, and Tahara does not disclose claimed elements as specified in claims 3, 5, and 16.

The examiner respectfully disagrees with the appellant. It is submitted that Tahara teaches storing mode information of the video data set and motion components in separate files and B-frame components of the video data set and P-frame components of the video data set in separate files (51a, 51b, 51c, and 51 of fig. 6), and Savatier further teaches a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7). Because of Tahara and Savatier are in the same environment of video encoding/decoding, it would have been obvious to one of ordinary skill in the art to modify the teachings of Savatier into the encoder of Savatier for improving encoding and decoding efficiency.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

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USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument about the "obviousness" is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument the basic principle of a proper prior art analysis within 35 U.S.C. 103 (a).

Not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. *In re Preda*, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and *In re Shepard*, 319 F.2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. *In re Sovish*, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. *In re Jacoby*, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969)). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. *In re Bode*, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

**C. Claims 4 and 16 are rendered obvious by Savatier and Carnahan.**

The appellant argues that there is no prima facie of obviousness to combine Savatier and Carnahan, and Carnahan does not disclose claimed features.

The examiner respectfully disagrees with the appellant. It is submitted that Savatier teaches splitting video data into the B components and P components (figs. 1 and 2, col. 2, lines 39-66), and a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

Carnahan teaches storing mode information of the video data set (horizontal and vertical vectors) and motion components NxM horizontal and vertical image data block include vectors) that include storing horizontal components of the video data set and vertical components of the video data set in separate files (col. 3, line 49-col. 4, line 3) and performing a run-length encoding of bit planed encoded coefficients (col. 11 and 12, note TRANSFORMER (52), QUANTIZER (54), and CODER (56) performs transforming, quantizing and nm-length coding the video data set). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the step of storing the mode information and motion components into the separate files (memories) and the transformer, quantize and coder of Carnahan into the encoder of Savatier for the same purpose of run-length coding the transformed, quantized video data set that



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retrieves from the separate files. Doing so would provide the quantization process reduces the magnitude or number of bits of each quantized word and the coder circuit to implement coding in an efficient manner.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument about the "obviousness" is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument the basic principle of a proper prior art analysis within 35 U.S.C. 103 (a).

Not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. In re Preda, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and In re Shepard, 319 F.2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. In re Sovish, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985).

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Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. In re Jacoby, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969)). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

**D. Claims 6, 7, 16 are rendered obvious by Savatier and Kato et al.**

The appellant argues that there is no prima facie of obviousness to combine Savatier and Kato et al. , and Kato does not disclose claimed features.

The examiner respectfully disagrees with the appellant. It is submitted that Savatier teaches the encoder for encoding the video sequence into the MPEG compliant transport stream using predicted frame information (col. 2, lines 39-66), and a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

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Kato teaches storing mode 3 B- frame components of the video data set (61 of fig. 3, note intra prediction for B-frame and mode 0, 1, and 2 B-frame components (14, 23 of fig. 3, note forward prediction, backward prediction, and bi-directional prediction) of the video data set in separate files and storing different color components of the video data set in different files (12 of fig. 3, see also fig. 5C, note Y, Cb and Cr are different color components). Therefore, taking the teachings of Savatier and Kato as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings intra-prediction mode for B-frame having forward, backward, and bi-directional prediction of Kato into the encoder of Savatier to improve efficiency of encoding. Doing so would provide to a decoder a higher quality image.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument about the "obviousness" is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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**E. Claims 8 and 16 are rendered obvious by Savatier and Weinberger.**

The appellant argues that there is no prima facie of obviousness to combine Savatier and Weinberger et al. , and Weinberger does not disclose claimed features.

The examiner respectfully disagrees with the appellant. It is submitted that Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this

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indicates the VLC is programmable to encode the video data, it is further noted that an MPEG like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

Weinberger teaches mapping negative values in one of the homogeneous files into positive values (col. 15, lines 59-64), and file header. Therefore, taking the teachings of Savatier and Weinberger as a whole, it would have been obvious to one of ordinary skill in the art to modify the technique of mapping negative values into one of homogeneous files into positive values into the encoder of Savatier to improve performance of encoding color image. Doing so would result in a more efficient compression of the image.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument about the "obviousness" is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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In response to applicant's argument the basic principle of a proper prior art analysis within 35 U.S.C. 103 (a).

Not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. In re Preda, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and In re Shepard, 319 F.2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. In re Sovish, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. In re Jacoby, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969)). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

**F. Claims 9 and 10 are rendered obvious by Savatier and Moroney et al.**

The appellant argues that there is no prima facie of obviousness to combine Savatier and Maroney et al., and Moroney does not disclose claimed features.

The examiner respectfully disagrees with the appellant. It is submitted that Savatier further discloses a computer-readable medium bearing Instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform .the steps of the methods (fig. 1, col. 4, lines 3-8; note the VLC is a memory programmed at respective address locations with variable length codewords corresponding to the address values, this indicates the VLC is programmable to encode the video data, it is further noted that an MPEG

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like video signal compression system inherently has computer programmable instructions to execute the compression/decompression processes, see flowcharts in figures 5-7).

Moroney teaches the MPEG coding technique uses a formal grammar ("syntax") and a set of semantic rules for the construction of bitstreams to be transmitted, wherein the grammar encoding would obviously have YK algorithm to encode the homogeneous files. Therefore, taking the combined teachings of Moroney and Savatier as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Moroney into the method of Savatier to improve coding efficiency.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument about the "obviousness" is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Tung Vo/

Primary Examiner, Art Unit 2621

Conferees:



Art Unit: 2621

/Mehrdad Dastouri/

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